

Application Serial No. 10/051,065

**AMENDMENTS TO THE CLAIMS**

1. - 9. (Cancelled)

5 10. (Previously Presented) In a directory server containing heterogeneous  
directory entries and a directory views hierarchy, each view containing a filter  
describing said view, a method of searching said view in said directory views  
hierarchy with a given filter, comprising the steps of:

10 (a) collecting filters from said view and all ancestor views of said view to  
form a first sub-filter;

rewriting said given filter using said first sub-filter to be a sub-tree search  
of the parent of the topmost view in said view hierarchy; and

performing said sub-tree search with said rewritten filter;

15 wherein each of said directory views belongs to a specific object class that  
contains a filter attribute, said filter attribute containing a filter that describes said  
directory views.

20 11. (Currently Amended) The method of Claim 10, wherein said directory  
entries can be stored at any underlying physical location, do not need to be  
physically in any particular place.

12. (Original) The method of Claim 10, wherein said directory server has a flat  
directory information tree.

25 13. (Currently Amended) The method of Claim 10, wherein the existence of  
said views is transparent to a client of said directory server and said client  
requires no special knowledge of an internal implementation format of said views  
to use them.

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14. (Currently Amended) The method of Claim 10, wherein each of said directory views begins with an ordinary a directory entry.

5 15. (Cancelled)

16. (Original) The method of Claim 10, wherein said filter attribute is omitted from said directory views to facilitate a hierarchical directory structure.

10 17. (Original) The method of Claim 10, wherein each of said directory views comprises sub-views which provide a subset of said views.

18. (Original) The method of Claim 17, wherein said sub-views comprise different subject domains from said directory views.

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19. (Previously Presented) The method of Claim 10, said rewriting step comprising:

(b) if the search is not a sub-tree search, collecting all filters from all descendent views to form a second sub-filter;

20 (c) adding a third sub-filter to ensure all children of said view are included in the search for one level search or ensure all descendants of said view are included for a sub-tree search; and

(d) combining said first sub-filter, said second sub-filter, and said third sub-filter and said given filter to produce said rewritten filter.

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20. (Previously Presented) The method of Claim 19, wherein step (a) further comprises the steps of:

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- (1) starting from the topmost view and working down;
- (2) adding each filter to said first sub-filter in step (a) using the logical AND operator; and
- (3) moving down said hierarchy and going to step (2) until at said view.

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21. (Previously Presented) The method of Claim 19, wherein step (b) further comprises the steps of:

- (1) working down said hierarchy until said hierarchy ends;
- (2) adding each filter to said second sub-filter in step (b) using the logical AND operator and the logical NOT operator;
- (3) repeating step (2) until all sub-views of said view have been accounted for.

22. (Previously Presented) The method of Claim 19, wherein step (c) further comprises the steps of:

- (1) for sub-tree searches, using the logical OR operator and a filter which includes the components of said descendent views' distinctive attributes, and which excludes the distinctive attribute of said view;
- (2) for one level searches, using the logical OR operator and a filter which includes the components of said children views' distinctive attributes, and which excludes the relative distinctive attribute of all children views of said view using the logical NOT operator; and
- (3) for base searches, using the filter "objectclass=nsview", wherein "nsview" is the object class of said views.

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23. (Previously Presented) The method of Claim 19, wherein step (d) further comprises the steps of:

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- (1) combining said third sub-filter from step (c) with the given search filter using the logical AND operator;
- (2) combining said first sub-filter from step (a) and said second sub-filter from step (b) with the given search filter using the logical AND operator; and
- 5 (3) combining the resulting filters from step (1) and (2) using the logical operator OR.

24. (Original) The method of Claim 19, wherein said sub-filters from steps (a), (b) and (c) may be cached so that the filter rewriting only needs to perform step  
10 (d), which amounts to simple filter concatenation.

25. - 26. (Cancelled)

27. - 28. (Cancelled)

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29. - 34. (Cancelled)

35. (Currently Amended) In a directory server containing heterogeneous directory entries, a method of hierarchically navigating said entries comprising  
20 the steps of:

- creating one or more directory views;
- organizing said directory views into a hierarchy, wherein said step of organizing uses only information concerning said entries, wherein each of said directory views belongs to a specific object class that contains a filter attribute,  
25 said filter attribute containing a filter that describes said directory view;
- collecting filters from said directory views and all ancestor views of said directory views to form a first sub-filter; and

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using one of said directory views that is most appropriate for navigating to said entries.

36. (Original) The method of Claim 35, said organizing step further comprising the steps of:

using said first sub-filter to be a sub-tree search of the parent of the topmost view in said view hierarchy

if the search is not a sub-tree search, collecting all filters from all descendent views to form a second sub-filter;

adding a third sub-filter to ensure all children of said view are included in the search for one level search or ensure all descendants of said view are included for a sub-tree search; and

combining said first sub-filter, said second sub-filter, and said third sub-filter to produce a rewritten filter.

37. (Currently Amended) In a directory server containing heterogeneous directory entries, a method of hierarchically navigating said entries comprising the steps of:

creating one or more directory views;

organizing said directory views into a hierarchy, wherein said step of organizing uses only information concerning said entries, wherein each of said directory views belongs to a specific object class that contains a filter attribute, said filter attribute containing a filter that describes said directory view;

rewriting said filter attribute using a first sub-filter; and

using one of said directory views that is most appropriate for navigating to said entries.

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38. (Previously Amended) The method of Claim 35, further comprising means to search said directory views by rewriting filters.